

Application No. 10/505,381
Amendment Dated April 30, 2007
Reply to Office Action of January 30, 2007

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APR 30 2007

REMARKS

This amendment is responsive to the Office Action mailed January 31, 2007 in connection with the above-identified patent application. In that Action, claims 1-5, 13, and 14 were examined because claims 6-12 and 15-21 were withdrawn from consideration as being directed to a non-elected claim group. The drawings were objected to because, according to the Examiner, Figures 1-4 should be designated by a legend such as –Prior Art— because, according to the Examiner, only that which is old is illustrated. Claims 1, 2, 4, 13, and 14 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,155,644 to Cook (“Cook”). Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook in view of U.S. Patent No. 5,504,669 to Wakabayashi, et al. (“Wakabayashi”).

Lastly in the Office Action, claim 5 was indicated as containing allowable subject matter. Accordingly, claim 5 was merely objected to as being dependent upon a rejected base claim, but was indicated by the Examiner as being allowable if rewritten into independent form to include all of the limitations of its base claim and any intervening claim(s).

THE NON-ART REJECTIONS

As noted above, claims 1-4, 13, and 14 were rejected over art. There were no non-art rejections of the pending claims.

However, the Examiner objected to the drawings because, according to the Examiner, Figures 1-4 should be designated by a legend such as –Prior Art—. The Examiner required corrected drawings in compliance with 37 C.F.R. § 1.121(d).

Applicant has tendered corrected drawing sheets in a paper filed together with this amendment whereat Figures 1-4 have been amended to include a –Prior Art— legend.

In accordance with the above, therefore, applicant respectfully submits the application including the drawings are now in proper form in accordance with the Patent Rules.

THE ART REJECTIONS

As indicated above, claims 1, 2, 4, 13, and 14 were rejected under 35 U.S.C. § 102(b) as being anticipated by Cook. Also, claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Cook in view of Wakabayashi. Claim 5 was indicated as containing allowable subject matter.

Claim 5 and Dependent Claims 36-43 are in Condition for Allowance:

Applicant has tendered an amendment to allowable claim 5 to include all of the limitations of base claim 1 and intervening claim 4. The Examiner noted on page 5 of the Office Action that claim 5 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Accordingly, applicant respectfully submits that claim 5 as amended above is now in condition for allowance over the art of record.

Applicant has added new claims 36-43 which add further limitations to allowable claim 5. No new matter has been added. More particularly, newly added claims 36-39 contain limitations similar to those previously presented in claims 8-11 of the original application. Claims 40-43 include limitations similar to those presented in original application claims 16, 18, 20, and 15, respectively.

Newly added claims 36-43 add additional limitations to allowable claim 5 and, accordingly, are allowable as well.

Allowance of claim 5 as amended above into independent form and of claims 36-43 dependent therefrom is respectfully requested.

Claims 1-4 are in Condition for Allowance:

Applicant has tendered an amendment to independent claim 1 to include limitations essentially corresponding to the limitations contained in original dependent claim 5 and indicated by the Examiner in the Office Action as not being taught in the prior art. More particularly, on page 5 of the Office Action, the Examiner noted in the record that "the prior art of record does not teach an ink cartridge comprising a R-C control circuit defining a preselected time constant value, used to distinguish a checking

read cycle of the cartridge and a normal read cycle of the cartridge, wherein the R-C control circuit is connected to the input interface of the microcontroller in combination with other features and limitations of claim 5."

Accordingly, applicant has tendered an amendment to independent claim 5 to recite an intelligent ink cartridge comprising at least one ink chamber for storing ink therein, an electronics module including a micro-controller with embedded memory storing a program, and a control circuit operative connected with the micro-controller and defining a preselected time constant value to distinguish between a checking read cycle of the intelligent ink cartridge and a normal read cycle of said intelligent cartridge.

In accordance with the above, therefore, applicant respectfully submits that independent claim 1 as amended above now includes limitations indicated by the Examiner as not being taught in the art of record. Accordingly, it is respectfully submitted that independent claim 1 as amended above and claims 2-4 dependent therefrom are patentable distinct and unobvious over the art of record.

Claims 13 and 14 are in Condition for Allowance:

Claims 13 and 14 were rejected as being anticipated by Cook. With regard to claim 13, the Examiner took the position that Cook discloses an electronics module of an intelligent ink cartridge for use with an associated ink jet printer apparatus, the electronics module storing identification information of the ink cartridge and ink remaining data, wherein the electronics module is a micro-controller with embedded non-volatile memory storing a program executable for improving the maximum ink capacity utilization of the ink cartridge. The Examiner cited to Cook at col. 16, lines 52-65 for support of his position with regard to the executable program improving the maximum ink capacity utilization of the cartridge.

Applicant has tendered an amendment to independent claim 13 to recite an electronics module storing identification information of an ink cartridge and ink remaining data, wherein the electronics module is a micro-controller with embedded non-volatile memory storing a program executable to control access and process operations of the ink remaining data in the ink cartridge for improving the maximum ink

capacity utilization of the ink cartridge by receiving ink utilization information from the associated ink jet printer apparatus, adjusting the ink utilization information, and storing the adjusted ink utilization information as ink remaining data. It is respectfully submitted that the system taught in Cook does not receive ink utilization information, adjust the ink utilization information, and store the adjusted ink utilization information as ink remaining data. Rather, at col. 16, lines 52-65 as cited by the Examiner, the Toshiba device (TMP47E186M) simply tracks the ink levels in the primary and secondary ink reservoirs 4 and 10 (col. 6, lines 57, 58).

Again, the system taught in Cook merely tracks ink levels consumed by the associated printing apparatus but does not improve the maximum ink capacity utilization of the ink cartridge as set out in independent claim 13 as originally presented. The Cook system does not maximize ink utilization but, rather, merely stores ink utilization information delivered from the associated printing apparatus with high fidelity. In independent claim 13, however, the program stored in the micro-controller controls access and processes operations of the ink remaining data in the ink cartridge for improving the maximum ink capacity utilization of the cartridge.

Applicant has tendered an amendment to independent claim 13 for clarification purposes only in order to clarify the distinctions of the claim over the Cook reference wherein the program executable in the micro-controller improves the maximum ink capacity utilization of the ink cartridge by receiving ink utilization information from the associated ink jet printer apparatus, adjusting the ink utilization information, and storing the adjusted ink utilization information as ink remaining data. For at least the above reasons, applicant respectfully submits that independent claim 13 and claim 14 dependent therefrom are patentably distinct and unobvious over the references of record.

Claims 22-35 are in Condition for Allowance:

Applicant has added new claims 22-35 above. Independent claim 22 recites an ink cartridge comprising at least one ink chamber adapted to store ink therein, an electronics module adapted to store identification information data of the ink cartridge

and ink remaining data, and a control circuit defining a preselected time constant value to distinguish between a checking read cycle of said cartridge and a normal read cycle of said cartridge.

The Examiner stated in the record on page 5 of the Office Action that the prior art of record does not teach an ink cartridge comprising a control circuit defining a preselected time constant value to distinguish a checking read cycle of the cartridge and a normal read cycle of the cartridge. Applicant agrees that neither the Cook patent nor the Wakabayashi patent teach, suggest, or fairly disclose any control circuits associated with an ink cartridge useful for distinguishing between a checking read cycle of the cartridge and a normal read cycle of the cartridge.

Newly presented independent claim 22 includes limitations not taught, suggested, or disclosed in the prior art of record. Accordingly, it is respectfully submitted that newly presented independent claim 22 and claims 23-35 dependent therefrom are patentably distinct and unobvious over the art of record.

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In view of the above amendments, comments, and arguments presented, applicant respectfully submits that all pending claims are patentably distinct and unobvious over the art of record.

Allowance of all pending claims and early notice to that effect is respectfully requested.

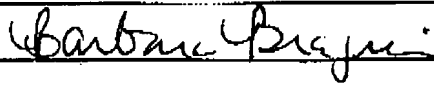
Respectfully submitted,

FAY SHARPE LLP



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1100 Superior Avenue, Seventh Floor
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216-861-5582

30 APR 07
Date

CERTIFICATE OF MAILING OR TRANSMISSION	
I hereby certify that this Amendment (and any item referred to herein as being attached or enclosed) is (are) being	
<input type="checkbox"/>	deposited with the United States Postal Service as First Class Mail, addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.
<input checked="" type="checkbox"/>	transmitted to the USPTO by facsimile in accordance with 37 CFR 1.18 on the date indicated below.
Express Mail Label No.:	Signature: 
Date: April 30, 2007	Name: Barbara Brazier

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICANT(S) : CHAN, On Bon, Peter
TITLE : AN INTELLIGENT INK
CARTRIDGE AND METHOD FOR
MANUFACTURING THE SAME
APPLICATION NO. : 10/505,381
FILED : August 20, 2004
CONFIRMATION NO. : 3788
EXAMINER : Shelby Lee Fidler
ART UNIT : 2861
LAST OFFICE ACTION : January 31, 2007
ATTORNEY DOCKET NO. : INNP 2 00016
Cleveland, OH 44114
April 30, 2007

SUBMISSION OF AMENDED DRAWINGS

MAIL STOP Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In compliance with Title 37 of the Code of Regulations, § 1.84 applicant submits nine (9) pages of replacement drawing sheets, specifically FIGURE(S) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 11A and 12 herewith.

Figures 1-4 are amended to include the legend —Prior Art— in accordance with the requirements from the Examiner as presented in the Office Action.

Replacement drawing sheets are being submitted to replace the drawings originally filed with the application and all drawing sheets are labeled "Replacement

Sheet.

Although no fees are believed to be required, applicant authorizes and requests that any fees be charged to Deposit Account No. 06-0308. An early indication of acceptability of the Amended Drawings is earnestly solicited.

Respectfully submitted,

FAY SHARPE LLP

30 APR 07
Date

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<input checked="" type="checkbox"/> transmitted to the USPTO by facsimile in accordance with 37 CFR 1.18 on the date indicated below.	
Express Mail Label No.:	Signature: <u>Barbara Brazier</u>
Date: April <u>30</u> , 2007	Name: Barbara Brazier

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